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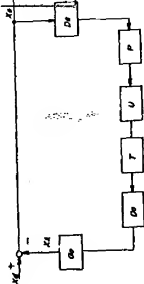
APPLICATION DATE : 09-05-84
APPLICATION NUMBER : 59093584

APPLICANT : SHARP CORP;

INVENTOR : OKUDA TORU;

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TITLE : CONTROL DEVICE OF LIGHT
CONVERGING LOCATION



ABSTRACT : PURPOSE: To stabilize the control of the titled device, by supplying a driving current to the driving circuit of an actuator through a damping correcting circuit whose transfer function T is expressed by a formula

$$T = (s^2 + 2\xi_0\omega_0s + \omega_0^2) / (s^2 + s\xi_1\omega_1 + \omega_1^2)$$
 (where, ξ_1 is damping number).

CONSTITUTION: A light converging location controlling device supplies a driving current, on which phase delay compensation and damping correction are performed by passing a target displacing signal through a phase delay compensating circuit whose transfer function is $U = (s + \omega_2) / (s + \omega_1)$, s : $j\omega$, ω_1 , ω_2 : two bent point frequencies ($\omega_1 < \omega_2$) and a damping correcting circuit whose transfer function is $T = (s^2 + 2\xi_0\omega_0s + \omega_0^2) / (s^2 + s\xi_1\omega_1 + \omega_1^2)$ (where, ξ_1 is damping number), when the resonance frequency and damping number of an actuator for focus control and radial control are ω_0 and ξ_0 ($\xi_0 < 1$), respectively. Therefore, the control can be stabilized, by setting the resonance frequencies of the phase delay compensating circuit U and damping correcting circuit a little lower than the resonance frequency ω_0 of the actuator by taking the fluctuation of the frequency ω_0 into consideration, when the phase delay compensating circuit U and damping correcting circuit are designed.

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